network should not parallel service areas designed around that network. For the Commission to license PCS according to landline LATA boundaries would be as inappropriate as the FAA requiring airplanes to fly only over the railroad infrastructure.

Even before the actual divestiture, the parties to the decree recognized that imposing LATA boundaries on Bell Operating Company mobile services often made no economic or technical sense.[41] Indeed, the MFJ court noted that "the LATA boundaries initially drawn were not precisely applicable in the context of automobile traffic." See United States v. Western Electric Co., Inc., 1992 U.S. Dist. Lexis 741 (D.D.C. 1992); United States v. Western Electric Co., Inc., 578 F. Supp. 643 (D.D.C. 1983). The Commission agreed. As early as December 1982, the Commission took the position that imposing LATA boundaries on Bell Operating Company mobile services would interfere with the licensees' need to integrate smaller urban and rural communities with major urban systems.[42] The notion that LATAs were not designed for cellular services was

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41 The first decree waivers issued by Judge Greene were cellular service area waivers. See United States v. Western Electric Co., 578 F. Supp. 653 (D.C. Cir. 1983).

42 See United States v. Western Electric Co., CA 82-0192 (D.D.C.), F.C.C. Reply at 5 (Dec. 15, 1982).

reiterated by the Commission in its most recent MFJ pleading, dated November 2, 1992, to the decree court.[43]

Furthermore, the inconsistency between LATA boundaries and wireless services has produced a burdensome and costly waiver process for the MFJ court, and the Commission should not readily embrace these same burdens. Since divestiture, approximately 60 MFJ waivers have been granted to conform cellular service areas to actual wireless markets, and as of March, 1991, 28 waivers were pending.[44] Given this, the adoption of LATA boundaries as PCS service areas would create a regulatory morass -- something the Commission specifically intends to avoid.

LATA boundaries are constantly changing. Since 1983, the LATA boundaries have changed nearly 100 times. Id. at § 13.5.2 n.30. The frequency of such modifications likely will not abate as they are requested in response to industry growth, changes in technology, and the concomitant natural evolution of the landline telephone network. Since the Commission does not have jurisdiction over LATA boundaries, when LATA boundaries are reviewed and modifications are granted by the decree court under the standards established by the antitrust consent decree, the Commission independently will have to adjust

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43 See United States v. Western Electric Co., CA 82-0192 (D.D.C.), F.C.C. Reply at 3 (Nov. 2, 1992).

44 See Kellogg, Thorne and Huber, Federal Communications Law, § 13.5.2 (Little, Brown & Co. 1992).

accordingly the PCS wireless service areas. In addition, modifications to LATA boundaries approved by the decree court would have to be clarified by the Commission. The impact on PCS license service areas each time the decree court "reassociates" an independent exchange, especially if the licensee is subject to the terms of the MFJ, is uncertain. This uncertainty inherent in the LATA modification process clearly will delay implementation of PCS systems.

Nationwide Licenses. The prospect of a nationwide license is facially attractive because of the speed with which the Commission could issue a few licenses. But as with LATAs and Trading Areas, the actual serviceability and utility are greatly at odds with the Commission's intention to bring PCS to market quickly and efficiently.

Even for the nation's largest companies, there is no reason to believe that the scale economies of PCS are so large as to warrant national licensing. A single license covering the entire United States very likely would mean that only the heavily populated urban areas would see PCS "speedily deployed." The remaining parts of the country would be left to wait until the small number of national PCS suppliers chose to bring PCS to them. Conversely, a licensing scheme which provides for smaller service areas will attract local service providers knowledgeable about and responsive to local community needs and patterns. Plainly then, all but the largest

metropolitan areas are more expeditiously served by smaller service areas.

B. The MSA/RSA Licensing Scheme Best Promotes the Goal of Universality of Service.

The goal of universality would similarly be best served by adopting the MSA/RSA licensing scheme. PCS services will reach the greatest number of customers if small, proportional, comprehensive service areas are used. The 734 MSAs and RSAs incorporate each and every area of the country. Thus the use of these service areas would ensure that PCS services are provided to all subscribers who desire them, regardless of where he or she lives.

Trading Areas. In contrast, the trading areas will not serve the Commission's universality goal. Indeed, the Trading Areas evince dramatic disparities in population measures and geographic coverage. Whereas the cellular rural service areas were designed to encompass an average population of 150,000, See Amendment of the Commission's Rules for Rural Cellular Service, 60 R.R.2d 1029 (1986), the Trading Areas span a vast range. The largest Basic Trading Area is New York, New York, with more than 18 million in population, followed closely by Los Angeles, California with more than 14.5 million. The top two BTAs alone thus account for more than 13% of the total U.S. population. In contrast is Williston, N.D., a BTA with a population of only 27,512. Wide disparities exist among the MTAs, as well. The largest MTA, New York, has a population of

over 26 million, while the smallest, Tulsa, Oklahoma, has a population of one million spread over hundreds of square miles. Similarly disparate are the geographic sizes of the MTAs. The MTA of San Francisco, California, for instance, includes two-thirds of the state of California and one-half of the state of Nevada. The Minneapolis, Minnesota MTA includes 211 counties in five states.[45] On the other hand, Richmond, Virginia is the center of an MTA which includes only the southern part of Virginia and a few counties in North Carolina. The Miami, Florida MTA includes only one-third of the geographic area of its state.

The disparities in population levels and geographic sizes among the Trading Areas likely would disserve the Commission's goal of universal service. These disparities thus make both BTAs and MTAs poor licensing vehicles -- indeed, the value of the top two licenses based on population alone would overwhelm the remaining ones. The MTAs, moreover, are too large to invite or accommodate entry by local firms well-suited to respond to specific local community needs.

LATAs. The inability of a LATA-based scheme to ensure universality is revealed by one simple fact: LATA boundaries have not been drawn in the parts of the country served by the independent telephone companies. LATAs include only the local

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45 The Minneapolis-St. Paul Major Trading Area includes counties from the states of Minnesota, North Dakota, South Dakota, Wisconsin, and Iowa. See Atlas at 39.

landline exchanges of the Bell Operating Companies. These Bell company exchanges provide service to 243 of the nation's 323 MSAs. Of the approximately 18,000 local exchanges in the United States, approximately 7,000, or only slightly more than one third, are served by the Bell Operating Companies. See United States v. Western Electric Co., 569 F. Supp. 990, 993 n.8 (D.D.C. 1983). In fact, roughly one-half of the geographic area of the United States does not fall within a LATA.[46] Were the Commission to design PCS service areas to parallel LATAs, the portions of the country served by the independent telephone companies would need to be divided for PCS. The added burden associated with that task is significant given that LATAs are fundamentally inappropriate for PCS services in the first place.

Nationwide licenses. A nationwide license would similarly thwart universal service. As discussed, a service provider who is initially licensed to serve the entire nation will be less inclined and less able to invest promptly in providing services to less densely populated regions of the country. Nor will a nationwide licensee be able to tailor PCS

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46 Rather, this area falls within a different, less rigid category of "associated" and "non-associated" independent telephone exchanges. United States v. Western Electric Co., 569 F. Supp. 990, 1008 n.85 (D.D.C. 1983)("The LATAs will not include any [non-BOC] areas. . . . The LATAs were drawn without reference to the [Independent] areas to ensure that the decree could not be construed as imposing any obligations or restrictions on [them]").

offerings so as to meet the particular requirements of local communities.

PCS appears at the moment to be primarily a locally provided service, and thus local, multiple licenses are more appropriate. Plainly, if regional or even national uses evolve, interconnection with interexchange networks and nationwide compatibility will enable such demands to be met contractually. And with ready transferability, even a national license could be achieved if the personal communications "market" subsequently determines it to be in the public interest.

Without compelling evidence that PCS services are national, or even regional, it appears unwise to sacrifice the benefits of a local licensing scheme producing numerous market participants. The desire to provide for a diversity of PCS services, and to promote the development of different approaches to PCS services would be thwarted if only a small number of firms participate in the PCS market.[47]

C. The MSA/RSA Licensing Scheme Best Promotes the Goal of Diversity of Services.

The Notice seeks to regulate PCS in a manner which will facilitate the development of a variety of PCS services. As PCS has not been defined, and potential services cannot be

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47 See Commission Rules Relevant to Cellular Communications Services, 78 F.C.C. 2d 984, 994 (1980).

predicted, a framework which promotes innovation and multiple sources of supply in PCS services is warranted here. Small service areas will advance this objective. Small service areas encourage diversity among PCS service providers. Rural areas will benefit from service providers whose incentives are to focus on their unique needs. With more participants in the embryonic PCS marketplace, innovation and creativity will be fostered. The MSA/RSA licensing scheme meets this goal.

Alternatives. The unwieldy size of the Major Trading Areas appears to make them particularly ill-suited to promote service diversity in the sense of tailoring systems to local needs or promoting efficiency. As discussed, their size and contours bear no particular relationship to wireless communications and plainly are inappropriate estimates of either efficient scale or communities of interest for PCS. Both BTAs and LATAs suffer similarly, and thus do not appear to promote the diversity goal either. As the Commission explained in rejecting BTAs for cellular licensing, their arbitrary nature "would restrict the ability of cellular service designed to propose service to national markets and to respond to local market characteristics." 98 F.C.C. 2d at 207.

The use of a nationwide service area for PCS also would run afoul of the Commission's goal of diversity because a decision to license three nationwide service providers would sharply limit the number and variety of PCS market participants. A nationwide license scheme likely would deter

smaller, local companies from entering the PCS market as the costs of providing nationwide service would be prohibitive. While PCS services are likely to be local in nature, and thereby limited to some degree by spectrum constraints, the "market" for PCS design, research and development, and manufacture is likely national or even global. Thus, a larger number of licenses within the U.S. will provide a more favorable environment than one in which there is only a few PCS providers. And as discussed earlier, a national license plan could bring PCS to the major population centers at the expense of the rest of the country. Such disproportionate distribution of new technologies is plainly inconsistent with the Commission's other goals of universality and speed.

D. The MSA/RSA Licensing Scheme Will Best Attain the Goal of Competitive Delivery.

Like the Notice's goal of ensuring diversity, the goal of competitive delivery will be accomplished most effectively by promoting small service areas and thus numerous potential suppliers, especially in system design and innovation. Competition and diversity will be facilitated by a regulatory structure which attempts to draw service areas approximating efficient scale, and thereafter permits the market to correct the inevitablly wrong guesses.

The MSA/RSA licensing scheme will serve this purpose. These areas have already proved workable for cellular. Where

the market has determined larger service areas to be more efficient, the areas have been readily combined.[48] And indeed, where the areas have proved to be too large, the regulatory structure has similarly allowed subdivison. The Notice tentatively finds that cellular areas have been too small, because of the trend toward "clustering" in the cellular industry. However, there is no particular basis for assuming or predicting that PCS service areas will replicate cellular clustering. There are numerous ways in which cellular service areas may be clustered. Clustering may or may not follow population centers, automobile traffic patterns, waterways or other myriad bases, each depending upon the particular market being targeted. Given the essential "unknowable" nature of PCS at this time, one cannot readily predict over what area PCS services will most efficiently be provided.

Even if cellular clusters were a precise barometer for the development of PCS, the Notice's service area options do not parallel cellular clusters. For instance, both McCaw and GTE have developed regional clusters which run vertically along

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48 Cellular service areas have been combined both by integrating the operations of adjacent systems, permitting different licensees to provide "seamless" service for their customers, and by the transfer and sale of licenses.

the coasts of Florida.[49] GTE predominantly services Florida's west coast, while McCaw services Florida's east coast. In contrast, Rand McNally divides Florida horizontally into three MTAs; one in southern Florida, one in the Central Orlando-Tampa area, and the third in northern Florida. The LATA boundaries are no more faithful to Florida's cellular clusters than the Trading Areas.

Furthermore, although the Notice focuses exclusively on the costs of drawing service areas too small,[50] there are also costs associated with drawing PCS service areas too large. As discussed earlier, large service areas will discourage participation in the emerging PCS market by smaller companies with limited resources. Transaction costs are also incurred in making service areas too large. If the Commission "overdraws" the areas, the market will undertake transactions to either subcontract or subdivide licensed service areas. Even with the numerous cellular RSAs, such transactions have occurred.

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49 In 1990 GTE provided cellular service to nearly 8,500 contiguous square miles in ten adjoining Florida counties. Such consolidation allowed for more efficient service on "important roads through these areas, such as I75, Highway 17 and State Roads 64 and 70." See GTE Mobilenet Introduces Cellular Service to Florida's First Rural Service Area, PR Newswire (7/24/90).

50 CTIA questions the basis of the Notice's suggestion that transaction costs for cellular consolidation are accurate measures of transaction costs that may arise in connection with PCS.

Similarly, a nationwide PCS service area will undermine the Commission's goal of ensuring competitive delivery. Indeed, eight months ago the Commission rejected a nationwide service area for IVDS as "antithetical to [its] goal of fostering a competitive market." See Amendment of Commission Rules to Provide Interactive Video and Data Services, 7 F.C.C. Rcd 1630, 1638 (1992). Yardstick competition across markets will help foster competition "within" markets as well.

E. A Mismatch Between Cellular License Areas and PCS Areas Would Produce Unique Costs Which Should Be Avoided.

A final set of costs, namely the sacrifice of scope and scale economies in the joint provision of PCS and cellular, will be incurred if the Commission adopts mismatched licensing areas for the the two types of licenses. As discussed in Section V, infra, as well as by Besen, et al., substantial joint efficiencies in the provision of PCS and cellular are predictable. If, however, a cellular company can jointly provide PCS and cellular only in the area in which the two licenses overlap, consumers must forego at least some efficiencies that could otherwise be captured if there were full geographic overlap. The consumer benefits are sacrificed for little apparent reason.

Moreover, the Notice also holds out the possibility that the Commission may preclude cellular companies from

holding PCS licenses in the same geographic area in which they provide cellular. As discussed in Section V, infra, CTIA believes this would be a costly error for consumers and competition. But should the Commission nevertheless proceed with such a policy, a mismatch in cellular and PCS licensing areas will create enormous inequities and competitive imbalances. For example, the cellular service area of Youngstown Cellular Telephone Company, which services a license area with a population of only 721,000, combines sections of the MTAs of Cleveland, Ohio and Pittsburgh, Pennsylvania. Under the Commission's proposed policy, however, Youngstown would be prohibited from servicing subscribers in both of these MTAs, whose combined population exceeds 9 million. See Atlas at 39-40. Moreover, this sort of problem would be rampant, requiring the Commission to engage in near-unmanageable waiver proceedings that would cause the very delays the Commission seeks to avert.

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In sum, the MSA/RSA licensing scheme will promote the Notice's four overriding goals. Its small service areas favor competition and encourage market participation by a variety of firms. The time and resources already invested in defining and fine-tuning these service areas for the particular needs of wireless communications will facilitate the rapid deployment of

PCS. Furthermore, universal PCS service will be advanced by adopting the established cellular licensing service areas.

The Commission proposes to abandon the substantial investment in MSAs/RSAs, suggesting that the tendency of cellular systems to cluster indicates that larger areas should be utilized to capture scale economies. However, in focusing myopically on the transaction costs of clustering, the Commission overlooks the inevitable costs that will be incurred in customizing any service area scheme for PCS. Because the cellular licensing scheme has already been proved out for wireless services, it represents the least-cost, most expeditious option.

V. ELIGIBILITY.

There is insufficient basis for the Notice's consideration of precluding cellular carriers from applying for PCS spectrum in their service areas. As a fundamental tenet of our nation's economic policies, there is a presumption in favor of open entry. Further, an analysis of the specific factors knowable about PCS "markets" at this time, as examined in detail in the Besen, et al. paper submitted with these comments, shows that the general presumption should be applied here. As discussed below, allowing cellular companies access to PCS spectrum will in fact promote consumer welfare.

A. The Commission Has Long Been Guided by the General Presumption Favoring Open Entry.

Basic economic theory maintains that, in general, markets operate most efficiently when barriers to entry are minimized. See, e.g., Nicholson, Microeconomic Theory (3d ed. 1988); II A. Kahn, The Economics of Regulation: Principles and Institutions, 146-47 (1970). This fundamental principle is a crucial part of our national economic policy, as embodied in the Sherman Act. See, e.g., Northern Pacific Railway v. U.S., 356 U.S. 1 (1958). Over the years, the Commission has integrated the principle into the public interest standard of the Act. It has thus endeavored to promote open entry in virtually all of its jurisdictional markets:

> We believe as a general principle that consumers are best served when all firms are permitted to compete freely rather than when some are restricted or excluded from service offerings altogether.[51]

Earlier regulations restricting entry have been systematically eliminated. See e.g., Cable Television/National Television Network Cross-Ownership, 70 R.R. 2d (P&F) 1531 (1992); MTS/WATS Market Structure, 81 F.C.C. 2d 177 (1980); Allocation of Frequencies in the Bands Above 890 MHz, 27 F.C.C. 2d 359 (1959); recon., 29 F.C.C. 2d 825 (1960); Specialized Common Carrier Services, 29 F.C.C. 2d 870 (1971), recon.,31

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51 An Inquiry into the Use of the bands 825-845 MHz and 870-890 MHz for Cellular Communications Systems, 78 F.C.C. 2d 984, 993 (1980).

F.C.C. 2d 1106 (1971), aff'd sub. nom. Washington Utilities and Transportation Comm. v. FCC, 513 F.2d 1142 (9th Cir.) cert. denied, 423 U.S. 836 (1975); Domestic Communications Satellite Facilities, 35 F.C.C. 2d 844 (1972), recon., 38 F.C.C. 2d 665 (1972); Telerent, 45 F.C.C. 2d 204 (1975), aff'd sub. nom. North Carolina Utilities Comm. v. FCC, 537 F.2d 787 (4th Cir.) cert. denied 429 U.S. 1027 (1976). By way of example only, in 1982, the Commission eliminated a previously imposed voice/record dichotomy in international service offerings by authorizing AT&T to provide international record services and permitting International Record Carriers (IRCs) to provide international voice services.[52] The Commission premised this ruling on its belief that market forces rather than artificial entry barriers best serve the public interest:

> [T]he statutory public interest standard can best be met by allowing marketplace forces to control entry, exit and the extent of competition. In allowing firms greater flexibility to enter new markets and to align their services to respond to user requirements, we have removed artificial barriers to entry. . . . In so doing, we have consistently found that additional competition in an expanding market is reasonably feasible and will serve some beneficial purpose.[53]

More recently, in its "video dialtone" decision, the Commission recommended to Congress that it amend the Cable Act to permit local telephone companies to provide video

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52 Overseas Communications Services, 92 F.C.C. 2d 641, 650 (1982).

53 Id. at 655 (emphasis added).

programming directly to subscribers in their telephone service areas. The Commission suggested that the previously established barriers to telco entry were no longer in the public interest and should be replaced instead by appropriate regulatory safeguards.[54]

The Commission has also been a staunch opponent of the line-of-business restrictions imposed on the Bell Operating Companies by operation of the AT&T Consent Decree, arguing that "competition is not enhanced by barring . . . particular competitors."[55]

The record to date in this proceeding establishes that the general rule of open entry should control for PCS.

B. The General Presumption Favoring Open Entry Should Control Here.

As shown by Besen, et al., under a variety of assumptions about what PCS might be, cellular providers'

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54 Telephone Company-Cable Television, Second Report and Order, Recommendation to Congress, and Second Further Notice of Proposed Rulemaking, ¶ 135 (1992).

55 FCC Responsive Comments, at 12 (April 27, 1987). Moreover, the Department of Justice, in recommending that all but the interexchange line-of-business restriction be removed, fully concurred in the Commission's views and concluded that "major steps to eliminate anticompetitive restraints on entry" must be taken because "[s]uch restraints are contrary to the procompetitive policies of both the decree and the FCC . . . ." Report and Recommendations of the U.S. Concerning the Line of Business Restrictions, filed in U.S. v. Western Electric Co., at 84-86 (February 2, 1987).

freedom to operate on PCS-assigned spectrum is pro-competitive. The argument against cellular entry into PCS rests exclusively on a narrow, static vision: PCS will be just "more cellular" and further, cellular companies have sufficient spectrum assigned to them at 800 MHz for today and for all time. There is little basis for the Commission to have confidence in either of these premises.

1. Market Considerations Do Not Justify Cellular's Exclusion.

As Besen, et al. conclude:

> A blanket prohibition against the acquisition of PCS licenses by incumbent cellular operators cannot be easily justified. Even in the "worst case," where PCS is a perfect substitute for traditional cellular service, a portion of the spectrum that the Commission proposes to allocate to PCS can be acquired by incumbents without significant threat of competitive harm. In the more likely cases where PCS is a weaker substitute for cellular, so that concerns about competitive harm are reduced, and/or where there are economies of scope between cellular and PCS, so that cost savings result when incumbents are permitted to offer PCS, an even larger acquisition of PCS spectrum by incumbent operators can be justified.

Besen, et al. at 38-39.

As discussed in detail in Section II, supra, PCS spectrum may be used to provide a wide variety of services to the public. Whether these services will be good substitutes for cellular service, and thus within the same "relevant

market," cannot be determined at this time. Moreover, there are substantial costs in creating a regulatory policy that presumes to know the answer.

Even if PCS is "just cellular," Besen, et al. explain, there is "little competitive justification for preventing incumbent cellular operations from acquiring access to a small portion of the PCS spectrum." The precise effects on competition and concentration, moreover, cannot be assessed based upon spectrum bandwidth alone. Indeed, this is amply demonstrated by reference to Fleet Call's 6-7 MHz of spectrum. Using digital technology, Fleet Call estimates that it will be able to derive the same amount of capacity as a 25 MHz-licensed cellular carrier using analog. And as explained infra, cellular carriers will have to meet analog needs for the foreseeable future. Besen, et al. give two examples of cellular company acquisition of PCS spectrum that would be utterly benign even under the DOJ Merger Guidelines.

Open entry rules have generally guided land mobile services. Perhaps the best example of this is the absence of any limitation on cellular companies' provision of SMRS, notwithstanding their likely substitutability. Moreover, the open entry rule here has not resulted in any anticompetitive trends; cellular carriers have been permitted to enter the SMR business in local markets and have been efficient market participants there. Palmer Communications owns and operates extensive SMR systems in and around both the Ft. Myers MSA and

the Dothan MSA, markets in which it is the cellular A Band licensee; similarly, the principal owners of Youngstown Cellular own and operate SMR systems in and around the Youngstown MSA, and the principal owners of Independent Cellular Network own and operate SMR licenses in Florida RSA 1 and 3, where Independent Cellular holds the A Band cellular license. This provides actual market experience highly instructive to the Commission's decisionmaking task here.

Of course, if cellular and PCS are not close substitutes, then there is no public interest basis at all for suggesting cellular exclusion. As shown in Besen, et al, some personal communications services may be independent of traditional cellular, so that allowing cellular operators to enter raises no competitive concerns, while others may be complements to traditional cellular, so that there are competitive benefits from allowing entry. When combined with the economies of scale and scope that are likely to result from combining cellular and PCS operations, there are solid public policy grounds for permitting cellular operators to enter.

2. There are Severe Technical Limitations on Cellular Companies' Ability to Provide PCS Via Cellular-Assigned Spectrum.

Cellular spectrum demands are substantial at this time. As explained in greater detail in Attachment B, there are numerous considerations driving cellular company participation in PCS. First, very simply, there are practical limitations in the capacity derivable from the 25 MHz assigned to cellular companies. Cellular companies at or near capacity

should not be penalized for their efficiency by artificially capping their market participation.

In major markets, where penetration has reached levels close to 3%, cellular systems are at or near the capacity of their full spectral assignment. The conversion to digital technology will alleviate this congestion problem, but it is a necessarily limited solution. First, there are practical limits to the additional capacity which digital technology and spread spectrum techniques can derive, especially as applied to channelized cellular spectrum. Second, some amount of spectrum will remain dedicated to analog uses for an indeterminate timeframe. Even 10 years from now, CTIA predicts nearly 16% of all subscribers will be analog users. To avoid stranding these analog users, as well as to support national roaming compatibility, the cellular industry must dedicate some of its spectrum to this less efficient technology. This commitment is of vital importance to the Act's public safety goal -- analog will remain the foundation for nationwide compatibility for the foreseeable future. The value to this compatibility is highlighted by cellular's crucial service to emergency service providers in times of crisis, such as when Hurricane Andrew hit southern Florida and Louisiana earlier this summer.

Third, digital conversion cannot free up enough spectrum to provide sufficient capacity for certain multimedia and broadband PCS services, such as high-speed data. Leaving cellular carriers to operate exclusively within their

cellular-assigned spectrum will effectively deny consumers the efficiencies which the Commission would otherwise promote by permitting cellular companies to provide PCS services via cellular assigned frequencies. If there is not enough spectrum assigned, such freedom and the anticipated cost savings to consumers, are wholly illusory.

3. The Joint Provision of Cellular and PCS Portends Considerable Cost Savings and Economic Surplus.

As explained by Besen, et al., there are sound reasons to believe that substantial economies of scope may exist between PCS and cellular. Substantial portions of the cellular infrastructure may be exploited in the provision of PCS, most significantly the base stations:

> [G]iven the number of base stations in a typical system and their costs, the cost saving is likely to be substantial. For example, for a system with 100 base stations, the cost saving would be on the order of $50 million.

Besen, et al. at 42-43.

Joint provision of PCS and cellular may also permit providers to best exploit the respective advantages of 800 MHz and 2 GHz frequencies. The propagation characteristics of 800 MHz signals make them superior for outdoor macrocell use, e.g., automobile mobile service. On the other hand, the signals at 2 GHz may be better suited for microcells, and thus may provide better insolation when used in indoor environments. A single service provider that can jointly offer both indoor handheld

service and earphone service at the respective frequencies would be well situated to serve consumer demands. The opportunity for one-stop shopping, which consumers may value highly, irrespective of the technical characteristics, is alone sufficient reason for allowing cellular companies to be PCS licensees.

CTIA firmly believes that the cellular industry has demonstrated itself to be an important, efficient, and innovative participant in wireless communications. Its prior successes should not be used to penalize it. Cellular companies' participation in PCS, like all other potential entrants, should be assessed based upon minimal qualification thresholds, and further, the public interest standard set forth in Section 309. The latter will permit the Commission to determine, at a time when it can more realistically and accurately assess market conditions, the competitive effects of a specific license application. See generally, United States v. F.C.C., 652 F.2d 72 (D.C. Cir. 1980) (Commission required to make serious examination of antitrust as well as other public interest consequences in evaluating mergers, acquisitions, and joint ventures). This same standard should be applied to mergers or partial acquisitions between and among PCS licensees, in lieu of adopting a priori rules such as "one-to-a-market" rules. As the Commission only just experienced in its regulation of radio, such rules can disserve the public interest by disrupting efficiencies. See Revision

of Radio Rules and Policies, F.C.C. 92-361 (rel. Sept. 4, 1992). Open entry should guide the Commission's decision here as well.

VI. LICENSING MECHANISMS.

CTIA supports the Notice's proposal to award PCS licenses for a ten-year term with a substantial renewal expectancy. As the Notice explains, these features are essential to promote the necessary risk-taking and investment which will be required to bring PCS to market. See generally, Cellular Licenses Renewal Order, 7 F.C.C. Rcd 719 (1992). The cellular renewal expectancy is an appropriate model for PCS licenses. It is also fully within the Commission's statutory authority. See Cowles Broadcasting, Inc., 86 F.C.C. 2d 993 (1981), aff'd sub nom. Central Florida Enterprises v. FCC, 683 F.2d 503 (D.C. Cir. 1982), cert. denied, 460 U.S. 1084 (1983).

CTIA also concurs in the Notice's tentative conclusion that comparative hearings would be inappropriate here. As the Notice correctly discusses, the hearing process is both slow and costly. Further, it should be emphasized that comparative hearings are in all likelihood ineffective in achieving their ostensible purpose. Once certain minimum qualifications are established, there is often no meaningful way to compare or rank competing applicants. Even where applicants are found superior to others based upon service proposals, there is no mechanism thereafter for ensuring that the winner adheres to

its proposal. Often, the process induces a bidding war wherein the service proposals become more and more elaborate and less and less likely to ever occur. See, e.g., Posner, Cable Television: The Problem of Local Monopoly (Rand Corp. RM-6309-FF 1970); Posner, The Appropriate Scope of Regulation in the Cable Television Industry, 3 Bell J. of Econ. 98 (1972); Williamson, Franchise Bidding for Natural Monopolies -- In General and With Respect to CATV, 7 Bell J. of Econ. 73 (1976); Lee, Cable Franchising and the First Amendment, 36 Vand. L. Rev. 867 (1983).

Competitive bidding, or auctioning, plainly provides a mechanism to promote allocative and distributive efficiency. Moreover, in doing so it also returns money to the national treasury for the assignment of a public asset. See, e.g., E. Kwerel and A. Felker, "Using Auctions to Select FCC Licensees," OPP Working Paper Series No. 16 (1985). However, as the Commission notes, without enabling legislation it is not an available option. Such legislation has been the subject of much controversy, and PCS should not be held hostage in that debate.

If Congress does not adopt enabling legislation the Commission should adopt a lottery mechanism for the assignment of PCS licenses. Lotteries, combined with the ready transferability of permits and licenses, will allow the allocative and distributive efficiencies to be captured. See generally, Cellular Lottery Selection, 98 F.C.C. 2d 175 (1986).